

AMENDMENT TO THE DRAWINGS

In the Drawings:

The attached replacement sheet includes changes to Figure 1A. This replacement sheet that includes Figure 1A only replaces the original sheet that includes Figure 1A only. The attached annotated sheet is marked to show the changes made.

The attached replacement sheet includes changes to Figure 2A. This replacement sheet that includes Figure 2A only replaces the original sheet that includes Figure 2A only. The attached annotated sheet is marked to show the changes made.

The attached replacement sheet includes changes to Figure 7. This replacement sheet that includes Figure 7 only replaces the original sheet that includes Figure 7 only. The attached annotated sheet is marked to show the changes made.

REMARKS

The Examiner's indication that all of the items listed on Form PTO-1449 of the Information Disclosure Statement of April 27, 2004 have been considered is acknowledged and much appreciated.

The Examiner objected to Figures 1A, 2A, and 7, a portion of paragraph [0045] of the specification, and the title set forth in the specification. It is believed that the amendments and remarks herein regarding Figures 1A, 2A and 7, and associated portions of the specification, paragraph [0045], and the title set forth in the specification, appropriately address the Examiner's objections. Other amendments to the Figures and the specification are also remarked upon below.

The Examiner objected to the title set forth in the specification. The specification has been amended to replace the title with a new title, which is believed appropriate in that the claims are directed to a pumping device or system (see new Claims 11-48) and a method of pumping (see new Claims 49-51 and new Claims 52-56), each of which employs a shape memory alloy.

The specification has been amended to replace text concerning the inventors with text that reflects the middle initial of one of the inventors.

The specification has been amended in paragraph [0001] to reflect a claim of priority to only two provisional applications. The reference to a third provisional application and its incorporation by reference is maintained, but this third provisional application is not a basis for the claim of priority. No new matter has been added by virtue of this amendment.

The specification has additionally been amended in paragraph [0008] to correct an obvious typographical oversight. No new matter has been added by virtue of this amendment.

The specification has been amended in paragraph [0037] to refer to reference numbers for the cylindrical bore and the piston discussed in paragraph [0037] and shown in Figure 2A, as is consistent with the replacement Figure 2A, as further discussed herein. No new matter has been added by virtue of this amendment.

The specification has additionally been amended in paragraph [0045] to correct various oversights concerning the reference numbers that originally appeared in that paragraph.

The specification has been further amended in paragraph [0047] to refer to the remainder of the first alternative embodiment of the invention, as shown in Figure 7. As

amended, the specification refers to two reference numbers, 718 and 719, and to a new reference number 720, as is consistent with the replacement Figure 7, as further discussed herein. No new matter has been added by virtue of this amendment.

The drawing of Figure 1A has been amended to correct an obvious oversight in the transposition of reference numbers 116 and 118 in original Figure 1A. As amended, the drawing of Figure 1A is consistent with the specification, for example, paragraph [0027] of the specification, and the drawing of Figure 1B. No new matter has been added by virtue of this amendment.

The drawing of Figure 2A has been amended to correct an obvious oversight in the appearance of reference number 215 for two different elements shown in original Figure 2A. One appearance of reference number 215 has been removed. As amended, the drawing of Figure 2A is consistent with the specification, for example, paragraphs [0034] and [0037] of the specification, and the drawings of Figures 2B and 2C. The removed reference number 215 has been replaced with the reference number 220 and a new reference 221 has been added, as is consistent with the amendment of paragraph [0037] of the specification, as described above. No new matter has been added by virtue of this amendment.

The drawing of Figure 7 has been amended to correct an obvious oversight in the appearance of a “□” symbol following reference number 712 in original Figure 7. As amended, the drawing of Figure 7 is consistent with the specification, for example, paragraph [0046] of the specification. Additionally, a new reference number 720 has been added, as is consistent with the amendment of paragraph [0047] of the specification, as described above. No new matter has been added by virtue of this amendment.

The Examiner also objected to the drawing of Figure 3. The objection is respectfully traversed. The portion of the specification that is directed to the drawing of Figure 3 includes paragraph [0035]. This portion of the specification does not refer to that drawing as being prior art. The portion of the specification to which the Examiner refers, namely, lines 6 to 7 of paragraph [0039], discusses a particular functional model, in which commercially available check valves are used. This portion of the specification does not refer to such check valves as being those shown in the drawing of Figure 3. In view of the foregoing remarks, it is believed that the drawing of Figure 3 is unobjectionable. Withdrawal of the objection to Figure 3 is earnestly solicited.

It is believed that all of the objections to the drawings and to the specification have been appropriately addressed.

The claims have been amended to cancel original Claims 1-10 and add new Claims 11-56, which are directed to subject matter that Applicants regard as their invention. No new matter has been added by virtue of these amendments.

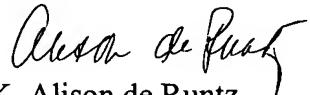
Former Claims 1, 2, 4, 5 and 7 were rejected under 35 U.S.C. 102(b), as allegedly being anticipated by U.S. Patent No. 5,62,482 to Lee (hereinafter, "Lee"). Former Claim 8 was rejected under 35 U.S.C. 102(b), as allegedly being anticipated by U.S. Patent No. 6,085,871 to Karamata (hereinafter, "Karamata"). Former Claims 9 and 10 were rejected under 35 U.S.C. 102(b), as allegedly being anticipated by Lee. Former Claims 3 and 6 were rejected under 35 U.S.C. 103(a), as allegedly being unpatentable over Lee. Each of the foregoing rejection is moot in view of the cancellation of the former claims. In view of the mootness of the above-mentioned rejections, no comments on any of same or any statement in support of same are necessary or provided herein.

New Claims 11-56 are believed to be patentable over each of Lee and Karamata. Each of Lee and Karamata fails to teach or suggest a device for pumping a predetermined volume of fluid that comprises a combination of elements as recited in new Claims 11-48, and fails to teach or suggest a method of pumping a predetermined volume of fluid that comprises a combination of elements as recited in new Claims 49-51 and 52-56.

CONCLUSION

Claims 11-56 define novel and non-obvious subject matter of the present invention. Therefore, an early notification that the application is in condition for allowance is earnestly solicited.

Respectfully submitted,


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Figure 7

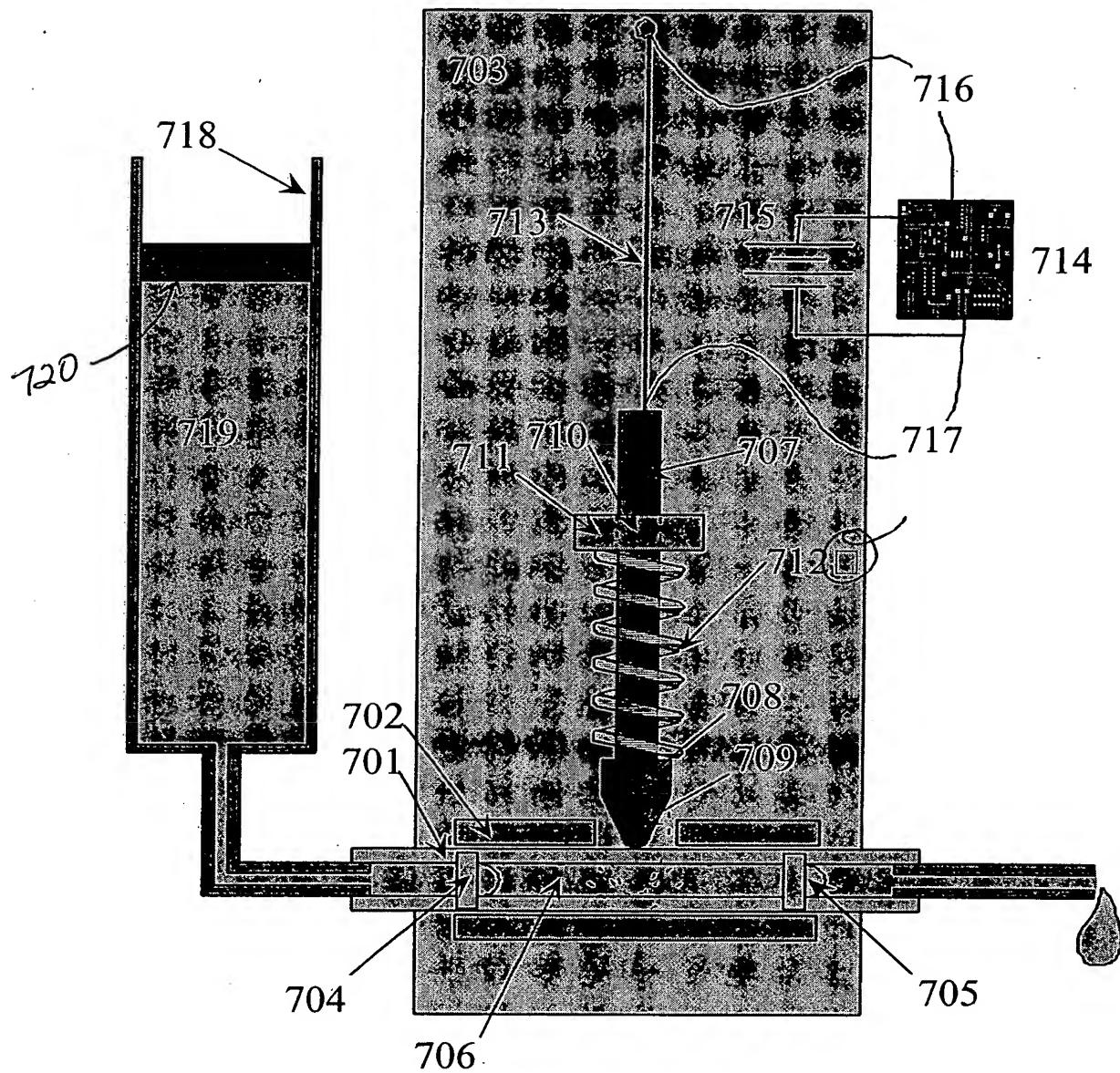


Figure 1A

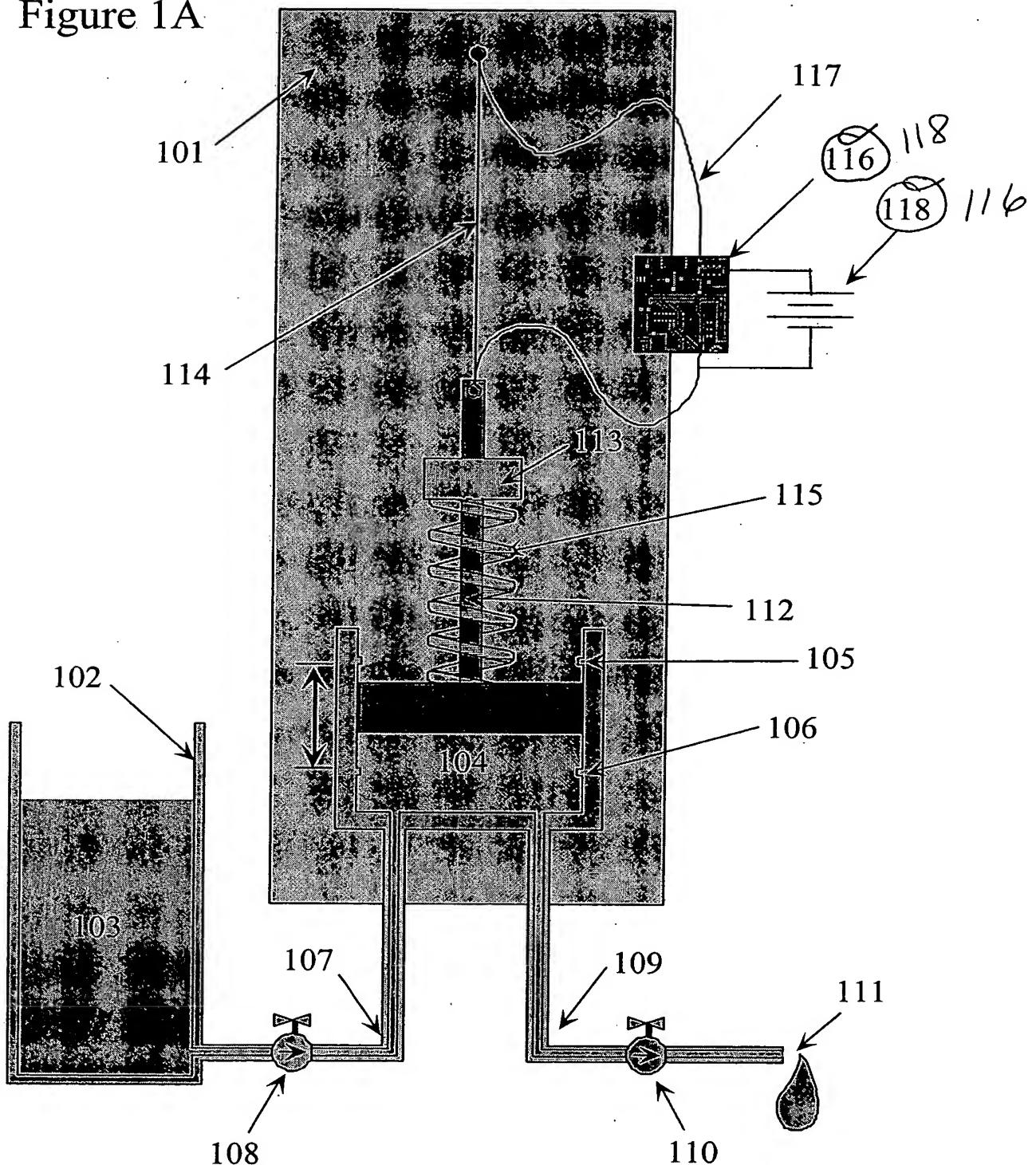


Figure 2A

